CURRICULUM VITAE

Wai T. Wong, MD PhD

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PART I: GENERAL INFORMATION

Citizenship: Citizen of Singapore; Permanent Resident, USA
Office Address: National Eye Institute
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Education:

1990-1994	**Bachelor of Science, Biology**	Massachusetts Institute of Technology (M.I.T.), Cambridge, MA
1990-1994	**Bachelor of Science, Chemical Engineering**	Massachusetts Institute of Technology (M.I.T.), Cambridge, MA
1994-2001	**Doctor of Medicine**	Washington University, St. Louis, MO
1994-2001	**Doctor of Philosophy, Neuroscience**	Washington University, St. Louis, MO

Postdoctoral Training:

2001 – 2002	**Intern, Transitional Year Program,** Department of Surgery, Presbyterian Hospital, Philadelphia, PA
2002 – 2005	**Resident in Ophthalmology,** Scheie Eye Institute, Department of Ophthalmology, University of Pennsylvania, Philadelphia, PA
2005 – 2007	**Fellow in Medical Retina**, National Eye Institute, National Institute of Health, Bethesda, MD

Licensure and Certification:

2001 – 2004	Limited License, Graduate Medical Trainee, Registration in Ophthalmology, Pennsylvania
2004 – present	Full License, Medical Physician and Surgeon, Pennsylvania
2007 – present	Diplomate, American Board of Ophthalmology

Academic Appointments:

2007 – 2011	Staff Clinician, National Eye Institute, NIH, Bethesda, MD
2011 – present	Tenure-track Investigator, National Eye Institute, NIH, Bethesda, MD
2007 – present	Chief, Unit on Neuron-Glial Interactions in Retinal Diseases, National Eye Institute, NIH, Bethesda, MD
2011 – 2017	Investigator (HS), National Eye Institute, NIH, Bethesda, MD
2017 - present	Senior Investigator (HS), National Eye Institute, NIH, Bethesda, MD

Professional Societies:

1996 – 2002	Society for Neuroscience
2004 – present	Association for Research in Vision and Ophthalmology (ARVO)
2003 – present	American Academy of Ophthalmology (AAO)
2007 – present	International Society for Eye Research (ISER)
2009 – present	Macula Society

Editorial Boards and Grant Reviews:

Editorial Board:

Scientific Reports (2014 – present)
Journal of Ophthalmology (2014 – 2017)

***Ad hoc* reviewer:**

Medicine and Other Fields

Journal of Clinical Investigation
Proceedings of the National Academy of Sciences
EMBO Molecular Medicine
Scientific Reports
PLoS One
Gene Therapy
Journal of Biomolecular Screening
Journal of Visualized Experiments
Expert Opinion on Therapeutic Patents

Neuroscience

Journal of Neuroscience
Glia
Neurobiology of Aging
Neurobiology of Disease
Brain Behavior Immunity
Journal of Neuroinflammation
Neuron Glia Biology
Developmental Neurobiology
Journal of Pathology
Frontiers in Cellular Neuroscience
Brain Pathology
Frontiers in Aging Neuroscience
Progress in Neurobiology

Ophthalmology and Vision Research

Ophthalmology
Investigative Ophthalmology and Visual Science
Experimental Eye Research
Molecular Vision
British Journal of Ophthalmology
Visual Neuroscience
Retina
Retina Cases and Brief Reports
Ocular Immunology and Inflammation
Current Eye Research
Eye
Graefe's Archive for Clinical and Experimental Ophthalmology
Acta Ophthalmologica
Journal of Ophthalmology
Ophthalmologica
Eye and Vision

Grant Reviewer for:

2008 Diabetes UK, London, UK
2009 National Institute on Alcohol Abuse and Alcoholism (NIAAA) Special Emphasis Panel, NIH, Bethesda, MD
2010 NIH Challenge Grant Panel, NIH, Bethesda, MD
2011 Fight for Sight UK Grant Review, London, UK

2012 Portuguese Foundation for Science and Technology (FCT), Lisbon, Portugal
2014 National Institute of General Medical Sciences (NIGMS) Centers of Biomedical Research Excellence (COBRE) P20 Exploratory Grants, NIH, Bethesda, MD
2015 Max and Minnie Tomerlin Voelcker Fund, San Antonio, TX
2015 Fonds de Recherche du Québec –Santé (FRQS), Government of Quebec, Canada
2015 Fight for Sight, UK
2016 Edward N. & Della L. Thome Memorial Foundation Awards Program in Age-related Macular Degeneration Research
2016 Pilot and Feasibility (P&F) Grants, Diabetes Research Center (DRC) at Washington University in St. Louis.
2017 Max and Minnie Tomerlin Voelcker Fund, San Antonio, TX
2017 BrightFocus Foundation Special Opportunity Award Grant Review

Awards and Honors:

1993 American Institute of Chemical Engineers Annual Chapter Award for academic excellence, M.I.T.
1994 Roger de Friez Hunneman Prize for outstanding scholarship and research in Chemical Engineering, M.I.T.
1994 Phi Beta Kappa, MIT
2001 William Ellis Prize for achievement in Ophthalmology Research, Washington University School of Medicine
2003 Selected Presentation for the Association of University Professors of Ophthalmology (AUPO) Research Forum
2008 Director's Award, National Eye Institute (NEI)
2009 Secretariat Award, American Academy of Ophthalmology
2009 Election to membership in Macula Society
2010 Young Investigator Travel Award to RD2010, XIVth International Symposium on Retinal Degeneration
2010 Senior Investigator Award for Best Poster, RD2010, XIVth International Symposium on Retinal Degeneration
2011 Director's Award, National Eye Institute (NEI)
2014 Young Investigator Award, Macula Society
2015 TransAmerica Lecturer, Department of Ophthalmology, University of California at San Francisco (UCSF), April 23, 2015, San Francisco, CA.
2017 Achievement Award, American Academy of Ophthalmology
2017 10th Sayer Lecture and Award, National Eye Institute, NIH

Committees/Community Service:

2006-2007 NIH Fellows Committee (Felcom): National Eye Institute Clinical Representative
2011- present Professional Advisory Board Member, Pseudoxanthoma Elasticum (PXE) International (www.pxe.org)
2013 Judge for Fellows Award for Research Excellence (FARE) travel awards.
2016 - present Mentor on the National Research Mentoring Network (NRMN), a nationwide consortium of biomedical professionals and institutions collaborating to provide all trainees across the biomedical, behavioral, clinical and social sciences with evidence-based mentorship and professional development programming.
2017 Mentor for the MIT Freshmen/Alumni Summer Internship Program (F/ASIP)

Teaching Activities:

1994 Teaching Assistant in Undergraduate 3rd-year level course in Reactor Design, Department of Chemical Engineering, M.I.T.
1997 Teaching Assistant in Medical school level course in Medical Genetics, Washington University Medical School
2002-2005 Lecturer for medical school course OP200 for 2nd year medical students, Introduction to Ophthalmology
2005- present Medical student teaching and mentorship in Retina Clinic at the National Eye Institute, NIH

2007 – present Attending physician mentoring fellows in the Medical Retina Fellowship Program, National Eye Institute, NIH

Thesis Committees

2017 Examiner for Ph.D. Thesis Committee: Nilisha Fernando, Australia National University, Acton, Australia

Mentoring:

Post-residency Fellows:

2007 – 2009: Catherine Cukras, MD PhD, Medical Retina Fellow (currently Staff Clinician, National Eye Institute, NIH)
2007 – 2009: Farzin Forooghian, MD, Medical Retina Fellow (currently Clinical Assistant Professor, University of British Columbia)
2009 - 2011: Annal D. Meleth, MD, Medical Retina Fellow (currently Retinal Specialist, Private Practice, Marietta, GA)
2009 - 2011: Nupura Bakshi, MD, Medical Retina Fellow (currently Assistant Professor, Department of Ophthalmology and Vision Sciences, University of Toronto)
2011 - 2013: Benjamin Nicholson, MD, Medical Retina Fellow (currently Retinal Specialist, Private Practice, St. Joseph, MI)
2011 - 2013: Naima Jacobs-El, MD, Medical Retina Fellow (currently Medical Officer, US Food and Drug Administration)
2011 - 2013: Monica Dalal, MD, Uveitis Fellow (currently Retinal Specialist, Private Practice, Washington DC Metropolitan Area)
2012 – 2013: Breno da Rocha Lima, MD, Uveitis Fellow (currently in private Retina practice, Jacksonville, FL)
2013 – 2014: Mary-Beth Aronow, MD, Medical Retina Fellow (currently Assistant Professor, Wilmer Eye Institute, Johns Hopkins School of Medicine)
2013 – 2014: Nirali Bhatt, MD, Uveitis Fellow (currently Assistant Professor of Clinical Ophthalmology, Scheie Eye Institute, University of Pennsylvania)
2013 – 2015: David Valent, DO, Medical Retina Fellow (currently in private practice in medical retina, Oregon)
2014 – 2015: Jesia Hasan, MD, Medical Retina Fellow (currently faculty at McGill University, Montreal, Canada)
2015 – 2016: Aman Sharma, MD, Medical Retina Fellow (currently private practice, Orlando, FL)
2015 – 2016: Karen Armbrust, MD, PhD, Uveitis Fellow (currently faculty, University of Minnesota, Department of Ophthalmology)
2015 – 2017: Akshar Abbott, MD, Medical Retina Fellow
2016 – 2017: Sapna Gangaputra, MD, Uveitis Fellow (currently Assistant Professor, Vanderbilt University, Department of Ophthalmology)
2016 – 2017: Tiarnan Keenan, MBBS, Medical Retina Fellow

Postdoctoral Research Fellows:

2007 – 2009: Aurora Fontainhas, PhD, Post-doctoral Intramural Research Trainee (currently Patent Examiner at the US Patent and Trademark Office)
2009 – 2013: Minhua Wang, MD PhD, Postdoctoral Fellow (currently Resident in Pathology, SUNY Buffalo)
2013 – 2015: Matthew Zabel, PhD, Postdoctoral trainee, Intramural Research Training Award (currently medical student at California Northstate Medical School)
2014 – 2017: Yikui Zhang, MD, Postdoctoral trainee, Intramural Research Training Award.
2016 – present: Sean Silverman, PhD, Postdoctoral trainee, Intramural Research Training Award.
2016 – present: Xiao Yang, PhD, Postdoctoral trainee, Intramural Research Training Award.

Medical Students

2007- 2008: Jung Eun Lee Langman, BS, Medical Student (from Duke University Medical School), Howard Hughes Scholars at NIH (currently Assistant Professor, Department of Radiology, University of North Carolina, NC)

2008- 2009:	Pradeep Mettu, BS, Medical Student (from University of Kentucky Medical School), Clinical Research Training Program (currently Private practice, Neuro-ophthalmology and Oculoplastics, Raleigh, NC)
2008- 2009:	Audree Condren, BS, Medical Student (from University of Oklahoma Medical School), Howard Hughes Scholars at NIH (currently Fellow, Breast Surgical Oncology Fellowship, MD Anderson Cancer Center)
2009 - 2010:	Mausam Damani, Medical Student (from University of California, Los Angeles), Howard Hughes Scholars at NIH (currently Cornea Specialist, Kaiser Permanente, Riverside, CA)
2009 – 2010:	Brian Toy, Medical Student (from University of California, San Francisco), Clinical Research Training Program, (currently Fellow in Surgical Retina, University of Southern California)
2009 – 2010:	Euna Koo, Medical Student (from University of Florida), Clinical Research Training Program, (currently Clinical Assistant Professor at Stanford University School of Medicine)
2010 – 2011:	Maanasa Indaram, Medical Student (from Duke University Medical School), Howard Hughes Scholars at NIH (currently Fellow in Pediatric Ophthalmology at Boston Children's Hospital, Harvard University, Boston, MA)
2011 – 2012:	Mei Zhou, Medical Student (from University of Chicago), Clinical Research Training Program (currently Resident in Ophthalmology, University of Illinois, Chicago)
2012 – 2013:	Tanya Glaser, Medical Student (from University of California at San Francisco), Medical Research Scholars Program (currently Resident in Ophthalmology, Duke University Medical School)
2013 – 2014:	Philip Petrou, Medical Student, Mount Sinai School of Medicine, Medical Research Scholars Program (currently Resident in Anesthesia, Stanford University Medical School)
2015-2016:	Janani Singaravelu, Medical Research Training Program Scholar, Ohio State University College of Medicine

<u>Postbaccalaureate and Summer Students</u>

2007- 2008:	Katharine Liang, BS, Post-baccalaureate Intramural Research Trainee (currently a MD-Ph.D Candidate at University of North Carolina)
2008:	Yunqing D. Wang, Undergraduate summer intern, Duke University
2009:	Waynekid Kam, Undergraduate summer intern, Duke University (currently Resident, Internal Medicine, University of Iowa)
2012:	Samuel Dresner, Undergraduate summer intern, Princeton University (currently Resident, Ophthalmology, Case Western Reserve School of Medicine)
2014:	Parth Shah, Medical Student Summer Intern, University of Illinois in Chicago
2015:	Shaimar Roselyn Gonzalez, Diversity in Vision Research and Ophthalmology (DIVRO) Program, Summer Intern, (currently Graduate Student, University of Texas Health Science Center at San Antonio)
2016, 2017:	Adam Lazere, Diversity in Vision Research and Ophthalmology (DIVRO) Program, Summer Intern, (currently undergraduate at Oberlin College)
2017:	Brandon Klein, Summer Intern, (currently undergraduate at Loyola Marymount University)

PART II: RESEARCH

Previous Grant Support

1. "Mechanism and Treatment of Retinal Hemorrhages in Exudative Age-related Macular Degeneration." 01/01/2009-12/31/2011. Prevention of Blindness Society of Metropolitan Washington. Total direct cost: $42,000. Principal Investigator.

2. "Age-related Microglia-RPE Interactions in AMD Pathogenesis." 04/01/2010 – 03/31/2013. American Health Assistance Foundation (AHAF). Total direct cost: $100,000. Principal Investigator.

Current Research Support

National Eye Institute Intramural Research Program

Major Research Interests

Clinical Research Interests

Age-related Macular Degeneration: Clinical trials for geographic atrophy; outcome measures research for AMD.

Retinal Imaging: OCT imaging in diabetic retinopathy and AMD, Multimodal imaging in macular telangiectasia, autofluorescence imaging in AMD

Retinal microglia as a cellular target for retinal therapeutics: Clinical trials on microglial inhibition in diabetic retinopathy and vascular occlusions.

Genetic diseases of the retina: Clinical characterization and genotype-phenotype correlations in von Hippel-Lindau disease

Translational Research Interests

Physiology of microglial cells in the retina: Study of physiology and function of microglia cells using live-cell imaging and genetic mouse models; cellular interactions between microglia and retinal neurons/RPE cells/Müller cells

Contribution of microglia to retinal pathology: Study of microglial involvement in mouse models of retinal disease

Age-related changes in microglial physiology: Microglia aging as a driver of neuroinflammatory change underlying age-related retinal diseases such as AMD, glaucoma, and diabetic retinopathy

Physiology and pathophysiology of the choroid: Cellular study of vascular and immune components of the choroid and their involvement in choroidal neovascularization and atrophy

Clinical Protocols:

Active Protocols:

Principal Investigator: Evaluation of Oral Minocycline in the Treatment of Geographic Atrophy Associated with Age-Related Macular Degeneration

Principal Investigator: The Natural History of Geographic Atrophy Associated with Age-Related Macular Degeneration

Associate Investigator: Age-Related Eye Disease Study (AREDS) Follow-Up

Associate Investigator: Genotype - phenotype Study of Patients with Plaquenil-induced Retinal Toxicity, with Evaluation of the ABCA4 Gene

Associate Investigator: Longitudinal Investigation of Dark Adaptation in Participants with Age-Related Macular Degeneration.

Associate Investigator: Generation of Induced Pluripotent Stem (iPS) Cell Lines From Somatic Cells of Participants with Eye Diseases and from Somatic Cells of Matched Controls

Associate Investigator: Evaluation of Single Nucleotide Polymorphism (SNP) in Patients with and Subjects without Age-Related Macular Degeneration (AMD).

Associate Investigator: Minocycline to Treat Branch Retinal Vein Occlusion.

Associate Investigator: Minocycline to Treat Central Retinal Vein Occlusion.
Associate Investigator: Study of Oral Minocycline in Treating Bilateral Cystoid Macular Edema Associated With Retinitis Pigmentosa.
Associate Investigator: A Phase I/II Trial for Intravitreous Treatment of Severe Ocular von Hippel-Lindau Disease Using a Combination of the PDGF Antagonist E10030 and the VEGF Antagonist Ranibizumab
Associate Investigator: Rod and Cone Mediated Function in Retinal Disease
Associate Investigator: Adaptive Optics Retinal Imaging

Previous Protocols:
Principal Investigator: Pilot Study of the Evaluation of Intravitreal Sirolimus in the Treatment of Bilateral Geographic Atrophy Associated with Age-Related Macular Degeneration
Principal Investigator: The Age-Related Eye Disease Study 2 (AREDS2): A Multi-center, Randomized Trial of Lutein, Zeaxanthin, and Omega-3 Long-Chain Polyunsaturated Fatty Acids (Docosahexaenoic acid [DHA} and Eicosapentaenoic acid [EPA] in Age-Related Macular Degeneration (NEI-site).
Principal Investigator: Pilot Study of the Evaluation of Subconjunctival Sirolimus in the Treatment of Bilateral Geographic Atrophy Associated with Age-Related Macular Degeneration
Principal Investigator: Pilot Study of Intravitreal Injection of Ranibizumab for Macular Telangiectasia with Neovascularization (MACTEL 1)
Principal Investigator: Pilot Study of Intravitreal Injection of Ranibizumab for Macular Telangiectasia without Neovascularization (MACTEL 2)
Principal Investigator: A Phase II Study of OT-551 Antioxidant Eye Drop in Participants with Bilateral Geographic Atrophy Associated with Age-Related Macular Degeneration.
Principal Investigator: Phase I Study of Intravitreal Injections Versus Anterior Sub-Tenon Injections of Triamcinolone Acetonide Formulation for Macular Edema in Retinal Disorders (EXTAC).
Principal Investigator: Pilot Study of Intravitreal Injection of Triamcinolone Acetonide Formulation for Retinal Vascular Disorders (TACPF).
Principal Investigator: Multi-center, randomized Phase II clinical trial to study the effects of preservative free triamcinolone acetonide and Avastin (Bevacizumab)in combination with photodynamic therapy in participants with age-related macular degeneration.
Associate Investigator: High Speed Indocyanine Green Angiography Findings in Induction/PRN Regimen of Intravitreal Ranibizumab Injection for Neovascular Age Related Macular Degeneration.
Associate Investigator: A Pilot Study for the Evaluation of Minocycline as a Microglia Inhibitor in the Treatment of Diabetic Macular Edema
Associate Investigator: Treatment of Choroidal Subretinal Neovascularization with Agents Directed Against the Immune Response.
Associate Investigator: Pilot Study for the Detection of Neutralizing Antibodies in Patients treated with Bevacizumab (Avastin™) or Ranibizumab (Lucentis™).
Associate Investigator: Lutein/Zeaxanthin and Omega-3 Supplementation in Persons Over Age 60 (LUZEOM).
Associate Investigator: Pilot Study of the Evaluation of Sirolimus in the Treatment of Diabetic Macular Edema.
Associate Investigator: Phase II Study of Implants of Encapsulated Human NTC-201 Cells Releasing Ciliary Neurotrophic Factor (CNTF), in Participants with Visual Acuity Impairment Associated with Atrophic Macular Degeneration
Associate Investigator: Pilot Study of Sunitinib Malate for Advanced Ocular Disease of Von Hippel Lindau Syndrome
Associate Investigator: Dextromethorphan for Diabetic Macular Edema
Associate Investigator: An investigation of retinal findings in patients with Signs and Symptoms of Alzheimer's Disease enrolled in 09-M-0198

Part III: BIBLIOGRAPHY

Original reports in peer-reviewed journals: (***** indicates corresponding author)

1. Zhang, Y, Zhao, L, Wang, X, Ma, W, Lazere, A, Qian, H.-h, Zhang, J, Abu-Asab, M., Fariss, R.N., Roger, J.E., **Wong, W.T.*** Repopulating microglia restore endogenous organization and function under CX3CL1-CX3CR1 regulation. ***Science Advances***, 2018, *in press.*

2. Wang H, Shepard M, Zhang C, Dong L, Walker DT, Guedez L, Park S, Wang Y, Chen S, Pang Y, Zhang Q, Gao C, Wong WT, Wiley H, Pacak K, Chew EY, Zhuang Z, Chan CC. Deletion of the von Hippel-Lindau gene in hemangioblasts causes hemangioblastoma-like lesions in murine retina. ***Cancer Research,*** 2018 *in press.*

3. Sleiman K, Veerappan M, Winter KP, McCall MN, Yiu G, Farsiu S, Chew EY, Clemons T, Toth CA; Age-Related Eye Disease Study 2 Ancillary Spectral Domain Optical Coherence Tomography Study Group. Optical Coherence Tomography Predictors of Risk for Progression to Non-Neovascular Atrophic Age-Related Macular Degeneration. ***Ophthalmology,*** 2017;124:1764-1777.

4. Ma, W., Zhang, Y., Gao, C., Fariss, R.N., Tam, J., **Wong, W.T.*** Monocyte infiltration and proliferation reestablish myeloid cell homeostasis in the mouse retina following retinal pigment epithelial cell injury. ***Scientific Reports***, 2017; 7:8433. PMC5559448

5. Yazdanie M, Alvarez J, Agrón E, **Wong WT**, Wiley HE, Ferris FL 3rd, Chew EY, Cukras C. Decreased Visual Function Scores on a Low Luminance Questionnaire Is Associated with Impaired Dark Adaptation. ***Ophthalmology***, 2017; 124:1332-1339.

6. Singaravelu, J., Zhao, L., Fariss, R.N., Nork, T. M., **Wong, W.T.*** Microglia in the primate macula: Specializations in microglial distribution and morphology with retinal position and with aging. ***Brain Structure Function***; 2017; 222:2759-2771. PMC5542874

7. Knickelbein, J.E., Jacobs-El., N., **Wong, W.T.,** Wiley, H.E., Cukras, C.A., Meyerle, C.B., Chew, E.Y. Systemic Sunitinib Malate Treatment for Advanced Juxtapapillary Retinal Hemangioblastomas Associated with von Hippel-Lindau Disease. ***Ophthalmology Retina,*** 2017;1:181-187. PMC5490440.

8. Thavikulwat, A.T., Jacobs-El, N., Kim, J.S., Agrón, E., Hasan, J., Meyerle, C.B., Valent, D., Cukras, C.A., Wiley, H.E., **Wong, W.T**., Chew, E.Y. Evolution of Geographic Atrophy in Participants Treated with Ranibizumab for Neovascular Age-related Macular Degeneration. ***Ophthalmology Retina***, 2017; 1:34-41. PMC5490440.

9. Wang, X., Zhao, L., Zhang, Y., Ma, W., Gonzalez, S., Fan, J., Kretschmer, F., Badea, T., Qian, H-h., **Wong, W.T.*** Tamoxifen provides structural and functional rescue in murine models of photoreceptor degeneration. ***Journal of Neuroscience***, 2017; 37:3294-3310. PMC5373119. https://www.eurekalert.org/pub_releases/2017-03/sfn-jhf032217.php

10. Zhao, L., Li, J., Fu, Y., Zhang, M., Wang, B., Ouellette, J., Shahi, P. K., Pattnaik, B., Watters, J.J., **Wong, W.T.,** Guo, L.-W. Photoreceptor protection via blockade of BET epigenetic readers in a murine model of inherited retinal degeneration. ***Journal of Neuroinflammation,*** 2017; 14(1):14. PMC5248448

11. Veerappan, M., El-Hage Sleiman, A-K, Tai, V., Chiu, S., Winter, K.P., Stinnett, S.S., Hwang, T.S., Hubbard III, G., B., Michelson, M., Gunther, R., **Wong, W.T.,** Chew, E.Y., Toth, C.A. Optical coherence tomography-reflective Drusen Substructures (ODS) predict progression to geographic atrophy in non-neovascular AMD. ***Ophthalmology***, 2016;123:2554-2570. PMC5125946

12. Zabel, M.K‡., Zhao, L‡., Zhang ,Y., Gonzalez, S.R., Ma, W., Wang, X., Fariss, R.N., **Wong, W.T.*** Microglial phagocytosis and activation underlying photoreceptor degeneration is regulated by CX3CL1-CX3CR1 signaling in a mouse model of retinitis pigmentosa. ***Glia,*** 2016; 64(9):1479-1491. (‡ indicates equal contribution). PMC 4958518

13. Cukras, C., Flamendorf, J., **Wong, W.T.,** Ayyagari, R., Cunningham, D., Sieving, P.A. Longitudinal Structural Changes in Late-Onset Retinal Degeneration. ***Retina,*** 2016; 36(12):2348-2356. PMC5115976

14. AREDS2 Research Group, Al-Holou SN, Tucker WR, Agrón E, Clemons TE, Sperduto RD, Ferris FL 3rd, Chew EY. The Association of Statin Use with Cataract Progression and Cataract Surgery: The AREDS2 Report Number 8. ***Ophthalmology***, 2016;123(4):916-7. PMC 4808327

15. Wang X‡, Zhao L‡, Zhang J, Fariss RN, Ma W, Kretschmer F, Wang M, Qian HH, Badea TC, Diamond JS, Gan WB, Roger JE, **Wong WT.*** Requirement for Microglia for the Maintenance of Synaptic Function and Integrity in the Mature Retina. ***Journal of Neuroscience***, 2016; 36:2827-42. (‡ indicates equal contribution) (Cover Article). PMC4879218

16. Wiley HE, Thompson DJ, Bailey C, Chew EY, Cukras CA, Jaffe GJ, Lee RW, Loken EK, Meyerle CB, **Wong W,** Ferris FL 3rd. A Crossover Design for Comparative Efficacy: A 36-Week Randomized Trial of Bevacizumab and Ranibizumab for Diabetic Macular Edema. ***Ophthalmology***, 2016; 123:841-9. PMC 4988394.

17. Folgar FA, Yuan EL, Sevilla MB, Chiu SJ, Farsiu S, Chew EY, Toth CA; Age Related Eye Disease Study 2 Ancillary Spectral-Domain Optical Coherence Tomography Study Group. Drusen Volume and Retinal Pigment Epithelium Abnormal Thinning Volume Predict 2-Year Progression of Age-Related Macular Degeneration. ***Ophthalmology***, 2016; 123:39-50. PMC 26578448

18. Nittala MG, Hariri A, **Wong WT,** Chew EY, Ferris FL, Sadda SR. Image Scaling Difference Between a Confocal Scanning Laser Ophthalmoscope and a Flash Fundus Camera. ***Ophthalmic Surg Lasers Imaging Retina***. 2015;46:872-9.

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19. Flamendorf J, Agrón E, **Wong WT,** Thompson D, Wiley HE, Doss EL, Al-Holou S, Ferris FL 3rd, Chew EY, Cukras C. Impairments in Dark Adaptation Are Associated with Age-Related Macular Degeneration Severity and Reticular Pseudodrusen. ***Ophthalmology***, 2015; 122:2053-62. PMC 4836058.

20. Zhao, L. ‡, Zabel, M.K. ‡, Wang, X., Ma, W., Shah, P., Fariss, R.N., Qian, H., Parkhurst, C.N., Gan, W-B., **Wong, W.T.*** Microglial phagocytosis of living photoreceptors contributes to inherited retinal degeneration. ***EMBO Molecular Medicine,*** 2015, 7:1179-1197 (‡ indicates equal contribution)(Cover Article). https://www.eurekalert.org/pub_releases/2015-07/nei-ibe062915.php PMC4568951

21. Ehler M, Dobrosotskaya J, Cunningham D, **Wong WT,** Chew EY, Czaja W, Bonner RF. Modeling Photo-Bleaching Kinetics to Create High Resolution Maps of Rod Rhodopsin in the Human Retina. ***PLoS One***, 2015; 10:e0131881. PMC4510609

22. Yiu G, Chiu SJ, Petrou PA, Stinnett S, Sarin N, Farsiu S, Chew EY, **Wong WT**, Toth CA. Relationship of central choroidal thickness with age-related macular degeneration status. ***Am J Ophthalmol.*** 2015,159:617-626.

23. Indaram M‡, Ma W‡, Zhao L, Fariss RN, Rodriguez IR, **Wong WT*.** 7-Ketocholesterol Increases Retinal Microglial Migration, Activation, and Angiogenicity: A Potential Pathogenic Mechanism Underlying Age-related Macular Degeneration. ***Scientific Reports***, 2015, 5:9144. (‡ indicates equal contribution). PMC4360733

24. Indaram M, Agrón E, Clemons TE, Sperduto RD, **Wong WT**, Ferris FL 3rd, Chew EY; Age-Related Eye Disease Study Research Group. Changes in Lens Opacities on the Age-Related Eye Disease Study Grading Scale Predict Progression to Cataract Surgery and Vision Loss: Age-Related Eye Disease Study Report No. 34. ***Ophthalmology,*** 2015, 122:888-96. PMC4414714

25. Cukras C, Huynh N, Vitale S, **Wong W.T.**, Ferris F.L., Sieving P.A. Subjective and Objective Screening Tests for Hydroxychloroquine Toxicity. ***Ophthalmology,*** 2015, 122:356-66.

26. Nicholson BP, Nigam D, Toy B, Stetson PF, Agrón E, Jacobs-El N, Cunningham D, Cukras C, **Wong W**, Wiley H, Chew E, Ferris F, Meyerle CB. Effect of Ranibizumab on High-speed Indocyanine Green Angiography and Minimum Intensity Projection Optical Coherence Tomography Findings in Neovascular Age-related Macular Degeneration. ***Retina,*** 2015, 35:58-68. PMC4276448

27. Petrou PA, Cunningham D, Shimel K, Harrington M, Hammel K, Cukras CA, Ferris FL, Chew EY, **Wong WT.*** Intravitreal sirolimus for the treatment of geographic atrophy: results of a phase I/II clinical trial. **Invest Ophthalmol Vis Sci.** 2014, 56:330-8. PMC4294293

28. Kim, S-Y., Yang H-J, Chang, Y-S., Kim, J-W., Brooks, M., Chew, E.Y., **Wong, W.T.,** Fariss, R.N., Rachel, R.A., Cogliati. T., Qian, H., Swaroop, A. Deletion of aryl hydrocarbon receptor AHR in mice leads to subretinal accumulation of microglia and RPE atrophy. ***Investigative Ophthalmology and Visual Science,*** 2014;55:6031-40. PMC4176417

29. Nicholson BP, Zhou M, Rostamizadeh M, Mehta P, Agrón E, **Wong W**, Wiley H, Nussenblatt R, Sen HN. Epidemiology of Epiretinal Membrane in a Large Cohort of Patients with Uveitis. ***Ophthalmology,*** 2014; 121:2393-8. PMC4252842

30. Wang, M, Wang, X, Zhao, L, Ma, W, Rodriguez, IR, Fariss, RN, **Wong, WT.*** Macroglia-Microglia Interactions via TSPO Signaling Regulates Microglial Activation in the Mouse Retina. ***Journal of Neuroscience,*** 2014, 34:3793-3806. PMC4276448

31. Kumar, A., Zhao, L., Fariss, R.N., McMenamin, P.G., **Wong, W.T.*** Vascular associations and dynamic process motility in perivascular myeloid cells of the mouse choroid: implications for function and senescent change. ***Investigative Ophthalmology and Visual Science,*** 2014, 55:1787-96. PMC4276448

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Book Chapters:

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Dissertation:

Wong, W.T. Role of Early Neurotransmission in the Regulation of Spontaneous Activity and Dendritic Development, Washington University School of Medicine, 2000.

Patents:

"Novel multicolor method for labeling and visualizing nerve cells" Lichtman, Jeff W.;**Wong, Wai T.**; Wong, Rachel**;** Gan, Wen-Biao; Grutzendler, Jaime – US Patent No. 6869772, March 22, 2005.

"Selective estrogen-receptor modulators (SERMs) confer protection against photoreceptor degeneration." **Wong, Wai. T.,** Xu Wang, Lian Zhao, Wenxin Ma - U.S. Patent Application No. 62/377,439, filed August 19, 2016.

Invited Presentations and Symposia

2018

- Invited Participant, Ryan Initiative for Macular Research, Arnold and Mabel Beckman Initiative for Macular Research, April 4-6, 2018, Beckman Center, Irvine, CA.
- **"Microglia in the Retina: Roles in Retina Function, Aging, and Disease."** Vision Research Seminar, University of Michigan, Department of Ophthalmology, June 7, 2018, Ann Arbor, MI.

2017

- Invited Participant, Ryan Initiative for Macular Research, Arnold and Mabel Beckman Initiative for Macular Research, Jan 11-14, 2017, Beckman Center, Irvine, CA.
- **"Microglia in the Retina: Roles in Retina Function, Aging, and Disease."** Invited speaker, Harrington Discovery Institute Seminar Series, Case Western Reserve Medical School, February 9, 2017, Cleveland, OH.
- **"Microglia in the Retina: Roles in Retina Function, Aging, and Disease."** Invited speaker, Wilmer Science Seminar Series, The Wilmer Ophthalmological Institute, The Johns Hopkins University School of Medicine, March 6, 2017, Baltimore, MD
- **"Aging Changes in Retinal Microglia and their Relevance to Age-related Retinal Disease."** Mini-Symposium Speaker, "Inflammaging and the Eye", Association for Research in Vision and Ophthalmology (ARVO) 2016 Annual Meeting, May 7-11, 2016, Baltimore, MD.
- **"Microglia-Neuron Interactions in the Healthy and Diseased Retina."** Mini-Symposium Speaker, "Common Pathogenic Role of Inflammation in Retinal Diseases", Association for Research in Vision and Ophthalmology (ARVO) 2016 Annual Meeting, May 7-11, 2016, Baltimore, MD.
- **"Microglia-Neuron Interactions in the Healthy and Diseased Retina."** Invited speaker, Department of Anatomy, Yong Loo Lin School of Medicine, National University of Singapore, June 6, 2017, Singapore.
- **"Tamoxifen provides structural and functional rescue in mouse models of photoreceptor degeneration",** Seminar speaker, Macula Society Annual Meeting, June 9, 2017, Singapore.
- **"Microglia in the Retina: Roles in Retina Function, Aging, and Disease."** Invited speaker, Regeneron Therapeutics, July 14, 2017, Tarrytown, NY.
- **"Microglia in the Retina: Roles in Retina Function, Aging, and Disease."** Invited speaker, Molecular Cell Biology/Department of Ophthalmology Seminar Series, University of Iowa School of Medicine, August 23-25, Iowa City, Iowa.
- **"New Developments in Translational Retinal Research"** Invited speaker, Visually Impaired Group of Vienna, Patrick Henry Library, October 16, 2017, Vienna, VA.
- **"Microglia in the Retina: Roles in Retina Function, Aging, and Disease." 10th Sayer Vision Research Lecture and Award Series.** National Eye Institute, NIH, November 17, 2017, Bethesda, MD.

2016

- Invited Participant, 8th Annual Conference, Arnold and Mabel Beckman Initiative for Macular Research, Jan 13-16, 2016, Beckman Center, Irvine, CA.
- **"Role of Retinal Microglia in Photoreceptor Degeneration in Inherited Retinal Degeneration."** Symposium Speaker, Macula Society Annual Conference, Feb 24-27, 2016, Miami, FL.
- **"Microglia in the Retina: Roles in Retina Function, Aging, and Disease."** Invited speaker, Jules Stein Eye Institute Vision Science Seminars, Stein Eye Institute, David Geffen School of Medicine, University of California Los Angeles, April 1, Los Angeles, CA.
- **"Parainflammation and what it means in the eye."** Mini-Symposium Organizer and Speaker, Association for Research in Vision and Ophthalmology (ARVO) 2016 Annual Meeting, May 1-5, 2016, Seattle, WA.
- **"Microglia in the Retina: How they work and how they fail in disease."** Invited speaker, National Center for Advancing Translational Sciences (NCATS), May 26, 2016, Rockville, MD.

- **"Geographic Atrophy in AMD: Clinical Trials and Outcome Measures."** Invited speaker, The Second Chinese (Huaxia) Ophthalmology Forum, July 9, 2016, Xiamen, China.
- **"Modulating the Immune Environment of the Retina as a Therapeutic Strategy: The Role of Microglia and Macrophages in Retinal Disease."** Invited speaker, Ophthalmic Drug Development Summit, July 26-28, Washington, D.C.
- **"Microglia contribute to photoreceptor demise via phagocytic and proinflammatory cellular mechanisms in inherited retinal degenerations."** XVII International Symposium on Retinal Degeneration, RD2016, September 19-24, 2016, Kyoto, Japan.
- **"Microglial phagocytosis of living photoreceptors contributes to inherited retinal degeneration."** Symposium speaker, Symposium: "Microglia and macrophages as therapy targets for retinal diseases". International Society for Eye Research (ISER), 22nd Biennial Meeting, September 22, 2016, Tokyo, Japan.
- Participant, Workshop on National Eye Institute Audacious Goals Initiative (AGI) on "Creating a Cellular Environment for Neuroregeneration." Chairs: Beth Stevens and Marie Burns, Nov 11, 2016, San Diego, CA.

2015

- **"Mural Cells and Dendritiform Myeloid Cells in the Mouse Choroid: Morphology, Distribution, and Interactions."** Symposium Speaker, Macula of Paris Congress 2015, Jan 8, 2015, Paris, France.
- Invited Participant, 7th Annual Conference, Arnold and Mabel Beckman Initiative for Macular Research, Jan 15-17, 2015, Beckman Center, Irvine, CA.
- **"Microglia-Retinal Cell Interactions in the Healthy, Aging, and Diseased Retina."** Invited Symposium Speaker, "Microglia: Key to understand neural development and pathology." Okinawa Institute of Science and Technology Graduate University, Feb 27-29, 2015, Okinawa, Japan.
- **"Microglia Cells in the Retina: What They Do and How They Contribute to Retinal Disease."** NEI Brown-Bag Seminar Series, National Eye Institute, NIH, Mar 19, Bethesda, MD.
- **"Microglia-Retinal Cell Interactions in the Healthy, Aging, and Diseased Retina."** Named Lecture: TransAmerica Lecturer, Department of Ophthalmology, University of California at San Francisco (UCSF), April 23, 2015, San Francisco, CA.
- **"Geographic Atrophy: Clinical Trials and Outcome Measures."** Invited Speaker, Cordes Scientific Symposium, Department of Ophthalmology, University of California at San Francisco (UCSF), April 24, 2015, San Francisco, CA.
- Participant, Workshop on National Eye Institute Audacious Goals Initiative (AGI) on "Photoreceptor Regeneration and Integration", Chairs: David Gamm and Rachel Wong., May 2, 2015, Denver, CO.
- **"Role of Retinal Microglia in Retinal Degeneration."** Invited Speaker, Minisymposium on "Glial Cell Pathology in Blinding Disease". Association for Research in Vision and Ophthalmology (ARVO) 2015 Annual Meeting, May 5, 2015, Denver, CO.
- **"Microglia in the Retina: A Cellular Target for Retinal Imaging."** Special Interest Group (SIG) Speaker, Association for Research in Vision and Ophthalmology (ARVO) 2015 Annual Meeting, May 5, 2015, Denver, CO.
- **"Microglia in the Retina: Roles in Retina: Function, Aging, and Disease."** James and Jean Culver Vision Discovery Institute, Georgia Regents University, Distinguished Seminar Series, September 15, 2015, Augusta, GA.
- **"Age-Related Macular Degeneration (AMD): Research and Therapies for the Leading Cause of Blindness in the United States."** Alliance for Eye and Vision Research Congressional Briefing, September 17, Washington, DC.

2014

- **"Microglia in the Retina: A Therapeutic Target for Age-related Retinal Disease".** Speaker, Award lecture for Young Investigator Award, Macula Society, Feb 19, 2014, 37th Annual Macula Society Meeting, Key Largo, FL

- **"Microglia in the Retina: How Microglia Function in the Healthy and the Aging Retina",** Invited Speaker, Vision Research Seminar Series, University of Colorado, Department of Ophthalmology, March 21, 2014, Denver, CO.
- **"Microglia in the Aging Retina: Can aging changes in retinal microglia contribute to age-related retinal disease?"** Organizer and Moderator , Special Interest Group (SIG), Association for Research in Vision and Ophthalmology (ARVO) 2014 Annual Meeting, May 4, 2014, Orlando, FL.
- **"Research Update on Age-related Macular Degeneration (AMD) and Retinitis Pigmentosa (RP)",** Invited Speaker, Vision Matters, 2014 Eye Research Symposium, Prevention of Blindness Society of Metropolitan Washington, June, 9, 2014, Rockville, MD.
- **"Perivascular Mural Cells in the Mouse Choroid."** Invited symposium speaker, Symposium on "Choroid in Health and AMD", International Society for Eye Research (ISER), 21st Biennial Meeting, July 20, 2014, San Francisco, CA.
- **"Research in Age-related Macular Degeneration."** Course Lecturer, Fundamental Issues in Vision Research (Course Directors: Mary Ann Stepp, Ted Wensel, David Papermaster), Marine Biological Laboratory, August 18, 2014, Woods Hole, MA.
- "**The aging phenotype of microglia in the retina and its relationship to AMD**." Symposium speaker, Special Interest Symposium: The role of mononuclear phagocytes in age related macular degeneration (AMD) (Organizer: Florian Sennlaub), European Association for Vision and Eye Research (EVER), Oct 1, 2014, Nice, France.
- **"von Hippel-Lindau-Associated Retinal Angioma: Features and Management."** Invited Speaker, VHL Alliance Annual Meeting, October 18, 2014, Rockville, MD.

2013

- **"Results of the Age-related Eye Disease Study 2 (AREDS2)".** Speaker, Eye on Vision, Radio program, WYPL-FM 89.3 Show for those with visual impairment, hosted by Vance Durbin. (http://eyeonvision.blogspot.com/2013/06/dr-wai-wong-and-dr-sunil-patel-on-june.html).
- **"Microglial Inhibition as a Therapeutic Strategy for Retinal Disease."** Speaker, Macula Society 36th Annual Meeting, March 2, 2013, Dana Point, CA.
- **"Microglia in Retinal Disease: A Cellular Target for Therapy?"** Organizer and Moderator, Special Interest Group, Association for Research in Vision and Ophthalmology (ARVO) 2013 Annual Meeting, May 7, 2013, Seattle, WA.

2012

- **"New Therapies for AMD: Will treatment for neurological & eye disorders hold promising results for each other?"** Invited speaker, 2012 Eye Research Forum: The Eye-Brain Connection, Prevention of Blindness of Metropolitan Washington, November 17, 2012, Chevy Chase, MD
- **"Pseudoxanthoma Elasticum (PXE): Eye Manifestations and Treatments."** Invited speaker, 2012 PXE International Biennial Conference, September 22, 2012, North Bethesda, MD
- **"Ocular von Hippel-Lindau Disease – Clinical Phenotypes and Current Treatments."** Invited speaker, NINDS Research Conference, August 16, Bethesda, MD.
- **"Aging Effects in Retinal Microglia and Potential Relationships with Age-related Retinal Disease."** Symposium speaker on Microglial Activation in Retinal Degeneration, XX Biennial Meeting of the International Society for Eye Research (ISER), July 24, Berlin, Germany.
- **"Microglia-Müller Cell Interactions in Retinal Inflammation."** Symposium speaker on Mechanisms of Degeneration, XV International Symposium on Retinal Degeneration, RD2012, July 19, Bad Gögging, Bavaria, Germany.
- **"Age-related Macular Degeneration – Overview and Update."** Keynote Speaker, Macular Degeneration Awareness Day in Montgomery County, MD, May 16, 2012 Silver Spring, MD.
- **"Microglia in the Retina: A Cellular Target for Therapeutic Intervention?"** Invited speaker, 138th Anniversary Meeting, Department of Ophthalmology, Scheie Eye Institute, University of Pennsylvania, May 12, 2012, Philadelphia, PA.

2011

- "**Clinical Studies of Geographic Atrophy".** Invited speaker, Department of Ophthalmology, National University Hospital, Yong Loo Lin School of Medicine, October 13, 2011, Singapore.
- **"Microglia in the Retina: Physiologic and Pathologic Aspects".** Invited speaker, Singapore Eye Research Institute, October 12, 2011, Singapore.
- **"The Nature of Aging Sight".** Invited Speaker, Public Seminar on "Sensory Loss: How Aging Sight and Hearing Impact Cognition", Prevention of Blindness Metropolitan Washington, Sibley Hospital, September 18, 2011, Washington, DC.
- **"Microglia in the Retina: Physiologic and Pathologic Aspects".** Invited speaker, International symposium of the Research Unit 1336, "Brain myeloid cells: New light on old friends." September 12, 2011, Potsdam, Germany.
- **"Clinical Studies of Geographic Atrophy".** Invited speaker, University of Maryland, Department of Ophthalmology, March 5, 2011, Baltimore, MD.
- **"Clinical Studies of Geographic Atrophy".** Invited speaker, Northwestern University, Department of Ophthalmology, March 14, 2011, Chicago, IL.
- **"Microglia in the Retina: Physiologic and Pathologic Aspects".** Invited speaker, Northwestern University, Department of Ophthalmology, March 14, 2011, Chicago, IL.
- **"Treatment of Geographic Atrophy by Topical Administration of OT-551: Results and Development of Outcome Measures."** Speaker, Macula Society 34th Annual Meeting, March 10, 2011, Boca Raton, FL.
- **"The Eye-Heart Connection".** Keynote Speaker, Public Seminar, Prevention of Blindness Metropolitan Washington, Charles Beatley Central Library, Alexandria, VA, February 26, 2011.
- **"Microglia in the Retina: Physiologic and Pathologic Aspects".** Invited speaker, Yong Loo Lin School of Medicine, National University of Singapore, Department of Anatomy, Singapore, January 19. 2011
- **"Treatment of Geographic Atrophy by the Topical Administration of OT-551: Results and Development of Outcome Measures".** Symposium Speaker, Retina Session, Asia-ARVO 2011 Conference, Singapore, January 20, 2011.
- **"Microglia in the Mouse Retina Alter the Structure and Function of Retinal Pigmented Epithelial Cells: A Potential Cellular Interaction Relevant to AMD".** Speaker, Free Paper on Immunology and Microbiology, Asia-ARVO 2011 Conference, Singapore, January 21, 2011.

2010

- **"Microglia in the Retina: Physiological and Pathological Aspects".** Invited speaker, Duke University Medical School, Department of Ophthalmology, Durham, NC, November 12, 2010.
- **"Pseudoxanthoma Elasticum (PXE) and the Eye".** Invited lecturer, PXE International 2010 Conference, Bethesda, MD, September 11, 2010.
- **"Retinal Microglia and their Role in Age-Related Macular Degeneration".** National Eye Institue 40th Anniversary Symposia Series, Symposium on Translational Research and Vision, National Institutes of Health, Bethesda, MD, June 24-25, 2010.
- **"Immune Interactions in the Retina: Role of Retinal Microglia in Age-Related Macular Degeneration. "** 2nd Annual Ocular Diseases and Drug Discovery Conference, Boston, MA, May 27- 28, 2010.
- **"What Eye Stem Cell and Genetic Research Offer in the New Decade"** Invited participant, Town Hall Meeting, Prevention of Blindness Society of Metropolitan Washington, Sibley Hospital, Washington, DC, April 18, 2010.
- **"Regulation of Dynamics and Distributions of Retinal Microglia**." Invited participant, Lasker/IRRF Initiative for Innovation in Vision Sciences, Howard Hughes Medical Institute, Janelia Farm Research Campus, Ashburn, VA, February 28 - March 3, 2010.

2009

- **"New treatments: Neuroprotection and other therapies".** Invited participant, Town Meeting, Prevention of Blindness Society of Metropolitan Washington, Sibley Hospital, Washington, DC, November 15, 2009.

- **"Clinical Trials for Geographic Atrophy at the NEI".** Invited Presentation, 135rd Anniversary Meeting, University of Pennsylvania, Department of Ophthalmology, Philadelphia, May 29, 2009.
- **"Macular Degeneration: Research Update".** Invited lecturer, Prevention of Blindness Society of Metropolitan Washington, Silver Spring, MD, April 16, 2009.

2008

- **"Dynamic Imaging of Retinal Microglia".** Invited seminar speaker, Penn State Diabetic Retinopathy Research Group, Hershey, PA, October 7, 2008.
- **"Pseudoxanthoma Elasticum (PXE) and the Eye".** Invited lecturer, PXE International 2008 Conference, Bethesda, MD, September 19-21, 2008.
- **"Ocular von Hippel-Lindau Disease".** Invited lecturer, 23rd Biennial Walter Reed Ophthalmology Postgraduate Course and Alumni Meeting, Bethesda, MD, March 24-25, 2008.
- **"Age-related Macular Degeneration and the Future".** Invited participant, Town Meeting, Prevention of Blindness Society of Metropolitan Washington, Sibley Hospital, Washington, DC, March 2, 2008
- **"Macular Telangiectasia – Cross-correlational Stuides with New Imaging Modalities".** Invited lecture to fellows, residents and staff, University of Rochester Eye Institute, Rochester, NY, February 22, 2008.

2004-2007

- **"Clinical and Genotypic Characterization of von Hippel-Lindau Disease – the NEI Experience".** Invited Presentation, 133rd Anniversary Meeting, University of Pennsylvania, Department of Ophthalmology, Philadelphia, June 23-23, 2007
- **"Measuring Outcomes from Ophthalmic Images".** Invited Lecturer, Course: "Clinical Research for the Ophthalmic Photographer", NEI/NIH, Bethesda, MD, March 23-24, 2007.
- **"Structural Plasticity in the Developing Retina".** Invited Research Seminar, Duke University, Department of Ophthalmology, September, 29, 2006.
- **"Regulators of Vascular Growth and Developing Retinal Vasculature".** Invited Speaker, Singapore National Eye Center (SNEC), Singapore, August 11, 2004.
- **"Structural Plasticity in the Developing Retina".** Invited Speaker, National University of Singapore, Department of Ophthalmology, Faculty of Medicine, Singapore, August 6, 2004.
- **"Effect of Over-expression of Pigment Epithelium-Derived Factor (PEDF) on Developing Retinal Vasculature in the Mouse Eye**". Research Forum, Annual Meeting for the Association of University Professors of Ophthalmology (AUPO), Sarasota, Florida, January 31, 2004